

-150-

several factors and generally the hilum and subcarnial nodes, and bialteral mdiastinal nodes up to the thoracic inlet are treated, as well as the primary tumor up to 1.5 to 2.0 cm of the margins.

5

Example 2Colorectal Cancer

Survival from colorectal cancer depends on the stage and grade of the tumor, for example precursor adenomas to metastatic adenocarcinoma. Generally, colorectal cancer can be treated by surgically removing the tumor, but overall survival rates remain between 45 and 60 percent. Colonic excision morbidity rates are fairly low and is generally associated with the anastomosis and not the extent of the removal of the tumor and local tissue. In patients with a high risk of reoccurrence, however, chemotherapy has been incorporated into the treatment regimen in order to improve survival rates.

Tumor metastasis prior to surgery is generally believed to be the cause of surgical intervention failure and up to one year of chemotherapy is required to kill the non-excised tumor cells. As severe toxicity is associated with the chemotherapeutic agents, only patients at high risk of recurrence are placed on chemotherapy following surgery. Thus, the incorporation of an antiangiogenesis inhibitor into the management of colorectal cancer will play an important role in the treatment of colorectal cancer and lead to overall

-151-

improved survival rates for patients diagnosed with colorectal cancer.

A preferred combination therapy for the treatment of colorectal cancer is surgery, followed by a regimen of one or more chemotherapeutic agents and one or more antiangiogenic agents including an MMP inhibitor, a COX-2 inhibitor, or an integrin antagonist, cycled over a one year time period. A more preferred combination therapy for the treatment of colorectal cancer is a regimen of one or more COX-2 inhibitors, followed by surgical removal of the tumor from the colon or rectum and then followed by a regimen of one or more chemotherapeutic agents and one or more COX-2 inhibitors, cycled over a one year time period. An even more preferred therapy for the treatment of colon cancer is a combination of therapeutically effective amounts of one or more COX-2 inhibitors.

A more preferred therapy for the treatment of colon cancer is a combination of therapeutically effective amounts of one or more COX-2 inhibitors in combination with the following antineoplastic agents: fluorouracil, and Levamisole. Preferably, fluorouracil and Levamisole are used in combination.

25 Example 3

Breast Cancer

Today, among women in the United States, breast cancer remains the most frequent diagnosed cancer. One in 8 women in the United States are at risk of developing breast cancer in their lifetime. Age, family

-152-

history, diet, and genetic factors have been identified as risk factors for breast cancer. Breast cancer is the second leading cause of death among women.

Different chemotherapeutic agents are known in art
5 for treating breast cancer. Cytotoxic agents used for treating breast cancer include doxorubicin, cyclophosphamide, methotrexate, 5-fluorouracil, mitomycin C, mitoxantrone, taxol, and epirubicin. CANCER SURVEYS, Breast Cancer volume 18,
10 Cold Spring Harbor Laboratory Press, 1993.

In the treatment of locally advanced noninflammatory breast cancer, COX-2 inhibitors can be used to treat the disease in combination with other COX-2 inhibitors, or in combination with surgery, radiation
15 therapy or with chemotherapeutic or other antiangiogenic agents. Preferred combinations of chemotherapeutic agents, radiation therapy and surgery that can be used in combination with the present invention include, but are not limited to the following combinations: 1)
20 doxorubicin, vincristine, radical mastectomy; 2) doxorubicin, vincristine, radiation therapy; 3) cyclophosphamide, doxorubicin, 5-fluorouracil, vincristine, prednisone, mastectomy; 4) cyclophosphamide, doxorubicin, 5-fluorouracil, vincristine, prednisone,
25 radiation therapy; 5) cyclophosphamide, doxorubicin, 5-fluorouracil, premarin, tamoxifen, radiation therapy for pathologic complete response; 6) cyclophosphamide, doxorubicin, 5-fluorouracil, premarin, tamoxifen, mastectomy, radiation therapy for pathologic partial
30 response; 7) mastectomy, radiation therapy, levamisole; 8) mastectomy, radiation therapy; 9) mastectomy,